

What is claimed is:

1.

A thin film negative temperature coefficient thermistor comprising:
a thin film resistive element of a deposited mixture of metal oxide film, the thin film resistive element having a negative temperature coefficient.

2.

The thin film negative temperature coefficient thermistor of claim 1 wherein the mixture of metal oxide film comprises manganese oxide.

3.

The thin film negative temperature coefficient thermistor of claim 1 wherein the mixture of metal oxide film comprises nickel oxide.

4.

The thin film negative temperature coefficient thermistor of claim 1 wherein the mixture of metal oxide film further comprising:
a manganese oxide;
a nickel oxide.

5.

A product line of negative temperature coefficient thermistors, comprising:
a first negative temperature thermistor product having a first physical size and having a first resistance defined by a first negative temperature coefficient of resistance versus temperature curve;

a second negative temperature thermistor product having a second physical size and having a second resistance defined by a second negative temperature coefficient of resistance versus temperature curve, the first physical size the same as the second physical size, the first curve different from the second curve.

6.

The product line of claim 5 wherein the first resistance at a first temperature is the same as the second resistance at the first temperature, the first curve and the second curve intersecting at the first temperature.

7.

The product line of claim 5 wherein the first negative temperature coefficient of resistance versus temperature curve and the second negative temperature coefficient of resistance versus temperature curve intersect on at least one temperature.

8.

A method of manufacturing a thin film negative temperature coefficient thermistor comprising:
selecting a mixture of metal film materials to provide a negative temperature coefficient; and
depositing the mixture of metal film materials on a substrate.

9.

The method of claim 8 further comprising:
associating a negative temperature coefficient of resistance versus temperature curve with the thin film negative temperature coefficient thermistor.

10.

The method of claim 8 wherein the selecting step is selecting a mixture of manganese oxide and nickel oxide to provide a negative temperature coefficient.

11.

The method of manufacturing a thin film negative temperature coefficient thermistor of claim 8 further comprising:

planarizing a substrate prior to the depositing step;
sputtering conductor terminals;
sputtering a passivation layer; and
heat treating.

12.

The method of claim 11 wherein the step of planarizing is applying silicon nitride film.

13.

The method of claim 11 wherein the step of sputtering a passivation layer is sputtering silicon nitride film.